PATENT APPLICATION
042390.P5271

Request for extension of time under 37 C.F.R. §1.136

Assignee herewith petitions the Assistant Commissioner for Patents to extend the time for response to the Final Office Action dated December 28, 1999 for 1 month(s) from March 28, 2000 to April 28, 2000.

Please charge Deposit Account #02-2666 in the amount of:

__X__ ($110.00 for a one month extension)
_____ ($380.00 for a two month extension)
_____ ($870.00 for a three month extension)
_____ ($1,510.00 for a four month extension)

to cover the cost of the extension.

REMARKS

Reexamination and reconsideration of this application is requested. Claims 1-14 and 16-25 remain in the application and claim 15 has been previously cancelled. No new claims have been added.

Applicants believe there is no charge for this amendment because no new claims have been added.

Response to the 35 U.S.C. §112, Second Paragraph, Rejection

The Final Office Action rejects claims 1-14, 16-20, 22, and 24-25 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants respectfully traverse this rejection for the reasons that follow.

With respect to claim 1, The Final Office Action objected to the use of "substantially simultaneously and asynchronously" and "substantially predetermined frequency."

The Final Office Action treated these features as synonyms

Applicants respectfully submit that the Final Office Action has improperly treated "simultaneously" and "asynchronously" as being complimentary to the same feature. The Final Office Action has improperly concluded that these terms were meant to be synonyms. Relying on this incorrect assumption, the Final Office Action concluded that the terms are in conflict with each other. For example, the Final Office Action stated "[I]t is suggested that the claims are specifically directed

to structural means as shown in the drawing to illustrate the combined simultaneously-asynchronously feature (see Final Office Action page 8).

However, Applicants respectfully submit that Final Office Action has improperly interpreted and combined these features. As explained in Applicants' specification and recited in claim 1, "simultaneously" and asynchronously" are two distinct features of the disclosed and claimed invention.

As pointed out by the Final Office Action on page 3, the terms "substantially" and asynchronously" are used together on page 8, lines 15-18 of Applicants' specification. However, Applicants would like to kindly point the Examiner to the repeated uses of these terms throughout Applicants' specification. Applicant would also like to point out that at least some of these occurrences is related to one of the features independent of the other. From these separate uses, one skilled in the art would understand that "simultaneous" and "asynchronously" are two distinct features of particular embodiment Applicants' invention. Moreover, one skilled in the art would be reasonably apprised of both the utilization and scope of Applicants' invention.

For example, page 2, lines 18-25 of Applicants' specification identifies one problem associated with conventional liquid crystal displays. Simply stated, an LCD display that has a large number of individual pixels to be charged may involve a high data rate. For example, two million pixels time 60 hertz times 8 bits per pixel may involve a data rate of 960 megabits per second.

As discussed on page 6, lines 26-32, of Applicants' specification, at least some embodiments of Applicants' invention, although not necessarily all of them, may address this concern. Although the scope of the present invention is not limited in this respect, a "... frequency of the square wave applied to transistors 190 and 115 need have no particular relation to when voltages are applied to capacitors 150 and 160. In this embodiment, although the invention is not limited in scope in this respect, a first voltage signal value is applied or driven onto one capacitor or voltage signal storage unit, **while substantially simultaneously, a second voltage signal value, comprising the logical inverse of that first voltage signal value, is applied or driven onto the other capacitor.**" (emphasis added)

Although the scope of Applicants' invention is not limited in this respect, some examples of Applicants' invention allow two different voltage signals to be applied to two different capacitors **substantially simultaneously**. By charging two capacitors substantially simultaneously, the date rate of the LCD may be improved.

Separately from the "simultaneous" feature of particular embodiments of Applicants' invention, Applicants' specification also describes particular embodiments of the invention where voltage signals are applied asynchronously to the storage elements. Although the scope of Applicants' invention is not limited in this respect, "... if a voltage signal modulation circuit in accordance with the present invention, such as the embodiment previously described, is employed, multiple image sources employing different frame rates may be **combined without employing circuitry to synchronize the signals from the different sources.** For example, because voltage signals are continually sampled from the storage capacitors, where multiple image sources are employed or combined, these signals may be rendered at their own individual frame rate since, to the user, **the visual changes occur asynchronously as the voltage signals are applied to the storage elements**" (page 7, lines 24-31). Applicants' specification further states: "[a]lthough this feature has a number of associated advantages, one particular advantage is that it **enables asynchronous update to the light modulating element of the display.**" (page 7, lines 17-19).

Although the scope of Applicants' invention is not limited in this respect. Applicants' specification further describes particular embodiments having both the "simultaneous" and "asynchronous" features. For example, page 9, lines 8-11, of Applicants' specification states "... respective voltage signals, such as positive and negative voltage signals, may be applied to respective voltage signal storage elements, such as storage capacitors, **substantially simultaneously and asynchronously.**" emphasis added

Accordingly, Applicants respectively submit that one skilled in the art, after reading Applicants' specification, would be reasonably apprised of both the utilization and scope of Applicants' invention.

The Final Office Action also objected to the use of "substantially predetermined frequency." Applicants' respectfully submit that Applicants' specification would reasonably apprise one skilled in the art of both the utilization and scope of this feature as well.

Federal Courts and M.P.E.P. permit the use of "Substantially"

It is well settled that if the claims, read in light of the specification, reasonably apprise those skilled in the art both of the utilization and scope of the invention, and if the language is as precise and the subject matter permits, the

courts can demand no more. (See, *Georgia-Pacific Corp. v. United States Plywood Corp.*, 258 F.2d 124,136 (2d Cir.).

More importantly, Courts have recognized that the use of "substantially" in a claim does not render the claim indefinite. The Court in *U.S. Philips Corp. v. National Micronetics Inc.* stated: "Although the statute requires an exact description of the invention, it does not require description in terms of exact measurement. All that is required is that the claims, when read in light of the specifications, inform those skilled in the art how to practice the invention and how infringement may be avoided. 188 U.S.P.Q. 662.

In this case the court considered whether "substantially equal" was indefinite. The court clearly found the term to permissible and definite in view of the specification. The Court held:

"The Court finds that the term "substantially equal" as used in each claim of the patent is not so indefinite as to render the patent invalid."

M.P.E.P. § 2173.05(b) also recognizes that the use of "substantially" is permitted and does not render a claim indefinite.

With regard to claim 1, Applicants would like to kindly point out that page 9, lines 11-2214 of Applicants' specification states:

"Likewise, the sampling may be **alternatively at a substantially predetermined rate, so as, for example, to maintain a substantially zero bias**, although again the invention is not limited in scope in this respect." (emphasis added)

Accordingly, Applicants respectively submit that one skilled in the art would understand both the scope and utilization of Applicants' invention after reading the examples shown and described in Applicants' specification. Furthermore, Applicants respectively submit that claim 1 is, and has always been, definite. Therefore, the rejection of claim 1 is respectively traversed. The Final Office Action also rejected claims 2-14 and 16-25 for similar reasons. Applicants traverse the rejection of these claims for the reason(s) provided for claim 1 above.

Additional arguments to traverse the rejections could have been made, but it is believed that the foregoing discussion is sufficient to overcome the Examiner's rejection.

Response to the 35 U.S.C. §103(a) Rejection

The Final Office Action also rejects claims 1-14 and 16-25 under 35 U.S.C. §103(a) as being unpatentable over Takahara et al. (US Patent 5,436,635) in view of Shields (US Patent 4,870,396). Applicants respectfully traverse this rejection in view of the remarks that follow.

1) THE FINAL OFFICE ACTION HAS NOT ESTABLISHED A PRIMA FACIE SHOWING OF OBVIOUSNESS.

It is well established that a prima facie showing of obviousness requires a teaching or a suggestion by the relied upon prior art of all the elements of a claim (M.P.E.P. §2142). Without conceding the appropriateness of the combination, Applicants respectfully submit that the rejection is improper because the Final Office Action has not established a prima facie showing of obviousness of all the elements of independent claims 1, 9, 14, 18, 22, and 24.

With regard to independent claims 1, 9, 18, and 24, Applicants would like to kindly point out that each of these independent claims recites a circuit or circuit configuration to substantially and asynchronously drive respective voltage signals. In addition, claims 14 and 22 recite the step of applying signals "substantially simultaneously and asynchronously."

However, the Final Office Action has ignored at least the "asynchronous" feature of the claims. As admitted in the Final Office "... the claims are specifically directed to structural means as shown in the drawings to illustrate the combined simultaneously-asynchronously frequency."

As explained above, the use of "simultaneously and asynchronously" does not render the claims indefinite. Moreover, it is improper for the Examiner to ignore these features of the claimed invention. Thus, Applicants respectfully submit that the Final Office Action did not provide any explanation how the combination of Takahara et al. and Shields anticipate the "simultaneous and asynchronous" feature of the claims. Consequently, Applicants can only speculate as to how the

combination of Takahara et al. and Shields makes this feature of the claimed invention obvious.

Furthermore, Applicants would like to kindly point out that the burden to rebut and showing of obviousness does not shift to Applicants until a prima facie showing of obviousness has been established. Since the Final Office Action did not provide any explanation as to how the combination makes all the features and limitations of claims 1, 9, 14, 18, 22, and 24 obvious, the Final Office Action has not established a prima facie showing of obviousness, and thus, the rejection is improper.

Since claims 2-8, 10-13, 16-17, 19-21, 23, and 25 depend from these claims, the Final Office Action has not established a prima facie showing of obviousness of these claims as well.

Conclusion

The foregoing is submitted as a full and complete response to the Final Office Action mailed December 28, 1999, and it is submitted that claims 1-14 and 16-25 are in condition for allowance. Reconsideration of the rejection is requested. Allowance of claims 1-14 and 16-25 is earnestly solicited.

Should it be determined that an additional fee is due under 37 CFR §§1.16 or 1.17, or any excess fee has been received, please charge that fee or credit the amount of overcharge to deposit account #02-2666.

If the Examiner believes that there are any informalities which can be corrected by an Examiner's amendment, a telephone call to the undersigned at (480) 554-9732 is respectfully solicited.

Respectfully submitted,

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